

Title (en)
LIQUID FILTER ASSEMBLY AND LIQUID FILTER CARTRIDGE

Title (de)
FLÜSSIGKEITSFILTERANORDNUNG UND FLÜSSIGKEITSFILTERPATRONE

Title (fr)
ENSEMBLE FILTRE ET CARTOUCHE FILTRANTE POUR LIQUIDE

Publication
EP 3834905 A1 20210616 (EN)

Application
EP 20211120 A 20100330

Priority
• US 21158609 P 20090331
• EP 16166136 A 20100330
• EP 10722850 A 20100330
• US 2010029228 W 20100330

Abstract (en)
A liquid filter cartridge is disclosed comprising: a non-seal member of a projection/receiver rotational alignment arrangement positioned on a second end construction at a location to engage another member of the projection/receiver rotational alignment arrangement on a liquid flow collar, in selected rotational alignment, in use, wherein :- the non-seal member of a projection/receiver arrangement on the second end construction includes a first, radially outwardly projecting, interference projection positioned in projection radially outwardly from an exterior surface of the central spigot; and- the first, radially outwardly projecting, interference projection defines a trapezoidally-shaped perimeter with: (i) a base directed toward the media; (ii) an end, opposite the base, directed toward the end tip of the central spigot; the end being shorter than base; and, (iii) two, opposite, converging sides converging in extension between the base and the end; and a liquid filter assembly comprising such filter cartridge.

IPC 8 full level
B01D 29/21 (2006.01); **B01D 35/147** (2006.01)

CPC (source: EP US)
B01D 29/21 (2013.01 - EP US); **B01D 29/96** (2013.01 - EP US); **B01D 35/027** (2013.01 - US); **B01D 35/147** (2013.01 - EP US); **B01D 2201/0415** (2013.01 - EP US); **B01D 2201/291** (2013.01 - EP US); **B01D 2201/302** (2013.01 - EP US); **B01D 2201/34** (2013.01 - EP US); **B01D 2201/4046** (2013.01 - EP US); **B01D 2201/4084** (2013.01 - EP US)

C-Set (source: US)
B01D 29/21 + B01D 29/96

Citation (search report)
• [A] DE 10052524 A1 20020425 - BEKO TECHNOLOGIES GMBH [DE]
• [A] WO 2005061073 A1 20050707 - CUNO INC [US], et al
• [A] WO 2005115581 A1 20051208 - PARKER HANNIFIN CORP [US], et al
• [A] WO 2008128150 A2 20081023 - PARKER HANNIFIN CORP [US], et al
• [A] US 5826854 A 19981027 - JANVRIN BRUCE C [US], et al

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)
AL BA ME RS

DOCDB simple family (publication)
WO 2010117799 A2 20101014; **WO 2010117799 A3 20101209**; BR PI1014936 A2 20160426; BR PI1014936 B1 20200303; CN 102438718 A 20120502; CN 102438718 B 20150826; CN 105413300 A 20160323; CN 105413300 B 20181113; DE 112010001473 B4 20210812; DE 112010001473 T5 20120809; DE 112010006145 B3 20230601; EP 2414061 A2 20120208; EP 2414061 B1 20160706; EP 3085427 A1 20161026; EP 3085427 B1 20201202; EP 3834905 A1 20210616; EP 3834905 B1 20220803; EP 4122577 A1 20230125; PL 3085427 T3 20210614; US 10195551 B2 20190205; US 10967310 B2 20210406; US 11839842 B2 20231212; US 2012205300 A1 20120816; US 2017028322 A1 20170202; US 2019151780 A1 20190523; US 2021187419 A1 20210624; US 2024066444 A1 20240229; US 9480940 B2 20161101

DOCDB simple family (application)
US 2010029228 W 20100330; BR PI1014936 A 20100330; CN 201080019320 A 20100330; CN 201510453699 A 20100330; DE 112010001473 T 20100330; DE 112010006145 T 20100330; EP 10722850 A 20100330; EP 16166136 A 20100330; EP 20211120 A 20100330; EP 22187980 A 20100330; PL 16166136 T 20100330; US 201013262071 A 20100330; US 201615224025 A 20160729; US 201816230297 A 20181221; US 202117194935 A 20210308; US 202318388373 A 20231109